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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,554	10/12/2005	Hiroji Masuda	5259-000058/US/NP	6681
27572 7590 07/31/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER BOLDA, ERIC L	
			ART UNIT 3663	PAPER NUMBER
			MAIL DATE 07/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/552,554

Applicant(s)

MASUDA ET AL.

Examiner

Eric Boldt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 3-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                            | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Species B, Fig. 3 in the reply filed on May 22, 2007 is acknowledged. Claim 2 reads on the species. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites "a branch which branches the pumping light divided by the divider in two directions," and "to supply outputs of the first and the second coupling devices to both ends of the erbium-doped fiber". The second part does not make clear what the two directions of the divided light are. The claim is interpreted as best understood by the examiner.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masayuki et al (Japanese Patent Pub. No. 05-129685, citation BE on IDS filed Oct. 12, 2005), in view of Kawakami (US Pat. 6,263,139). Masayuki discloses an amplifying optical fiber module (Fig. on p. 574) comprising a pumping light source (4), a coupler (21) which couples the pumping light to the signal light, and coupler (22) which branches the pumping light into two parts with a predetermined ratio, one going in a copropagating and one going in a counterpropagating direction, and an amplifying fiber (6). Note that in this case, the divider of signal and pump is also the coupler (21). The clause "to output the pumping light in a direction opposite to that in which the signal light is outputted" and "to supply the first and the second coupling devices to both ends of the erbium-doped fiber" are essentially statements of intended or desired use. Thus, these claims as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

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A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

In this case, the signal light may be input in the opposite direction (shown by arrows) from the direction in the Figure, without any change in operation, so that the pumping light at (21) is in a direction opposite to that in which the signal light is propagating. The outputs (22c) and (22d) supplying both ends of the amplifying fiber.

Masayuki does not specifically disclose that the amplifying fiber module is part of an optical fiber communication system, with a signal output device (transmitter) and a plurality of transmission fibers from the transmitter, , a signal light reception device (receiver) nor that the pump is located within the receiver. Masayuki does not specify that the optical amplifying fiber (6) is an erbium-doped fiber. However, Kawakami et al. teach in Fig. 1 and Fig. 4 an optical fiber communication system, with a transmitter (1) which transmits the signal light on a plurality of transmission fibers (31), and fiber to the left of (25a) with a optical pump source (24) located within a receiver (2). The pump and signal lights are coupled with the coupler (25a) onto the transmission fiber. The optical fiber communication system includes an optical amplifier with an erbium doped fiber (42) (5<sup>th</sup> col. lines 39-42). The pump light propagates in a direction opposite to the signal light. It would have been obvious to one skilled in the art (e. g. an optical engineer) to include the transmitter and receiver with the optical amplifying module of Masayuki, to communicate optical signals.. Doping the optical amplifying fiber with

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erbium, is notoriously well-known, and would be obvious in the optical amplifier of Masayuki. Further, it would be obvious to place the pump of Masayuki in the receiver module, as taught in Kawakami, for the advantage of ease of access (for e. g. optical transmission in a submarine cable).

### ***Information Disclosure Statement***

6. The information disclosure statement filed on Oct. 12, 2005, Sept. 7, 2006 and March 27, 2007 have been considered by the Examiner.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Huber, Toyohara, Pedersen et al., Kinoshita, Grubb et al., Hodgson et al., Bao, Sugaya et al., Vasilyev et al., and Shirai.

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Bolda whose telephone number is 571-272-8104. The examiner can normally be reached on M-F from 8:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Jack Keith, can be reached on 571-272-6878. Please note the fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Eric Boldt*

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